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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,194	12/20/2001	George Michael Hey	2705-203	4905
20575	7590	04/10/2006		
MARGER JOHNSON & MCCOLLOM, P.C. 210 SW MORRISON STREET, SUITE 400 PORTLAND, OR 97204			EXAMINER NGUYEN, BRIAN D	
			ART UNIT 2616	PAPER NUMBER

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,194

Applicant(s)

HEY, GEORGE MICHAEL

Examiner

Brian D. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-18, 21-31, 34-44 and 47-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2, 3, 6, 8, 9, 12, 14-18, 21-25, 27-31, 34, 36, 38, 40-44, 47-51 and 53-57 is/are allowed.
- 6) ☒ Claim(s) 4, 5, 7 and 13 is/are rejected.
- 7) ☒ Claim(s) 10, 11, 26, 35, 37, 39 and 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Drawings

1. New corrected drawings (figure 6) in compliance with 37 CFR 1.121(d) are required in this application because “(!EMPTY ... FULL)” is unclear. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Objections

2. Claims 10, 11, 26, 35, 37, 39, and 52 are objected to because of the following informalities:

Claim 10, line 3, “an empty threshold” seems to refer back to “empty threshold” in line 3 of claim 9. It is suggested to change “an empty threshold” to --the empty threshold--.

Claim 11, line 3, it is suggested to change “a full threshold” to --the full threshold--.

Claim 26, line 3, it is suggested to change “a full and empty” to --a full threshold and the empty--. In line 4, change “a full threshold” to --the full threshold--.

Claim 35, line 2, after “containing software” it is suggested to insert --executable by a processor--.

Claim 37, line 2, after “containing software” it is suggested to insert --executable by a processor--.

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Claim 39, line 4, it is suggested to change "a full and empty threshold" to --a full threshold and the empty threshold-- and "a full threshold" to --the full threshold--.

Claim 52, lines 3-4, it is suggested to change "a full and empty threshold" to --a full threshold and the empty threshold-- and "a full threshold" to --the full threshold--.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, because the claim is a single means claims. See MPEP 2164.08(a).

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation "the depth logic" in line 6, "the half_full threshold" and "the full threshold" in line 7. There is insufficient antecedent basis for this limitation in the claim. It is suggested to replace "wherein the depth logic" with --and a depth logic-- and "the half_full threshold" and "the full threshold" with --a half_full threshold-- and --a full threshold--, respectively.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umayabashi in view of Mukouyama et al (2004/0202169).

Regarding claim 4, Umayabashi discloses a system for controlling a FIFO, comprising: a controller receiving a channel value indicating a number of channels used in a TDM data stream for transferring data, the controller varying data fill level threshold levels in the FIFO used for enabling read or write operations according to the number of channels value (see, for example, elements 801-803 in figure 3). Umayabashi does not specifically disclose a clock position signal that enables the FIFO read or write operations for a single clock period of a TDM clock.

However, using a clock signal to enable the read or write operation for a single clock period of a TDM clock is well known in the art. Mukouyama discloses this feature (see write and read control units 13 and 17 in figure 1 with clock signal that control the read and write operation). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the clock signal as taught by Mukouyama in the system of Umayabashi in order to regulate the system operation.

Regarding claim 5, Umayabashi discloses a system for controlling a FIFO, comprising: a controller receiving a channel value indicating a number of channels used in a TDM data stream for transferring data, the controller varying data fill level threshold levels in the FIFO used for

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enabling read or write operations according to the number of channels value (see, for example, elements 801-803 in figure 3). Umayabashi does not specifically disclose a clock synchronization circuit for synchronizing a FIFO serial read or write enable with a serial interface clock. However, this feature is well known in the art. Mukouyama discloses this feature (see, for example, figure 1 and paragraphs 0036 and 0053). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the clock synchronization circuit as taught by Mukouyama in the system of Umayabashi in order to synchronize the system.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Umayabashi in view of Tran et al (2004/0213251).

Regarding claim 13, Umayabashi discloses a system for controlling a FIFO, comprising: a controller receiving a channel value indicating a number of channels used in a TDM data stream for transferring data, the controller varying data fill level threshold levels in the FIFO used for enabling read or write operations according to the number of channels value (see, for example, elements 801-803 in figure 3); Umayabashi does not specifically disclose a TDM switch coupled to a first FIFO port and an external interface coupled a second FIFO port. However, a network switch with a TDM switch coupled to a first FIFO port and an external interface coupled a second FIFO port is well known in the art, Tran discloses this feature (see, for example, figure that shows the switch 16 connected to input/output ports and TDM FIFOs are shown in figures 3 and 4). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the TDM switch and FIFOs as taught by Tran in

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the system of Umayabashi in order to orderly store and forward the data packets to their destinations.

Allowable Subject Matter

10. The indicated allowability of claims 4, 5, and 13 are withdrawn in view of the newly discovered reference(s) to Mukouyama and Tran.

11. Claims 2-3, 6, 8, 9, 12, 14-18, 21-25, 27-31, 34, 36, 38, 40-44, 47-51, and 53-57 are allowed.

12. Claims 7, 10, 11, 26, 35, 37, 39, and 52 would be allowable if rewritten or amended to overcome the objection(s) and/or rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

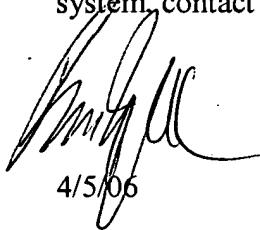
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Irwin et al (5,841,771).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D. Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



4/5/06

BRIAN NGUYEN
PRIMARY EXAMINER